

CLAIMS

1. A disc cartridge for storing a disc that has a first side with a first functional portion and a second side, the disc cartridge comprising:

5 a cartridge body including a disc storage portion, a chucking opening and a head opening, wherein the disc storage portion has a disc window and a bottom and stores the disc therein so that the first side thereof is exposed through the disc window; the chucking opening is provided on the bottom
10 of the disc storage portion so as to get the disc chucked externally; and the head opening is also provided on the bottom of the disc storage portion so as to allow a head, which reads and/or writes data from/on the second side of the disc, to access the second side of the disc;

15 a shutter, which is supported to, and movable with respect to, the cartridge body so as to expose or cover at least the head opening; and

 a second functional portion, which is provided for the cartridge body and which produces an audiovisual effect by
20 cooperating with the first functional portion of the disc.

2. The disc cartridge of claim 1, wherein the first and second functional portions produce a visual effect by cooperating with each other.

5 3. The disc cartridge of claim 1, wherein the first and second functional portions produce an audio effect by cooperating with each other.

10 4. The disc cartridge of claim 1, wherein audiovisual information is stored on the second side of the disc, and the audiovisual effect is associated with the audiovisual information on the second side of the disc.

15 5. The disc cartridge of claim 2, wherein the first functional portion is a first design provided on the first side, the second functional portion is a second design provided on a portion of the upper surface of the cartridge body near the disc window, and the first and second designs are combined together to make up a third design that looks
20 like a single continuous design.

6. The disc cartridge of claim 5, wherein the first design is a picture drawn on the first side and the second design is a picture drawn on the upper surface.

5 7. The disc cartridge of claim 6, wherein the first and second designs are planar.

8. The disc cartridge of claim 6, wherein the first and second designs are embossed.

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9. The disc cartridge of claim 8, wherein the depth of the first embossed design is substantially equal to that of the second embossed design.

15 10. The disc cartridge of claim 6, wherein the first side of the disc and the upper surface of the cartridge body are textured.

11. The disc cartridge of claim 6, wherein the first and
20 second designs are holograms.

12. The disc cartridge of claim 2, wherein the first functional portion is a tablet that is provided on the first side to allow the user to draw or erase any traces thereon or therefrom, and the second functional portion is an erasing portion that is provided for the cartridge body and is used for erasing the traces that have been drawn on the tablet.

13. The disc cartridge of claim 12, wherein the tablet includes a magnetic body so as to allow the user to draw the traces by bringing a magnet or another magnetic body close to the surface of the tablet.

14. The disc cartridge of claim 13, wherein the tablet includes a plurality of small rooms, each being filled with a viscous fluid and a magnetic powder.

15. The disc cartridge of claim 14, wherein the erasing portion is a magnet plate that is provided on the bottom of the disc storage portion of the cartridge body.

16. The disc cartridge of claim 15, wherein the traces that have been drawn on the tablet are erased by rotating the disc within the disc storage portion of the cartridge body.

5 17. The disc cartridge of claim 2 wherein the first functional portion is a matrix-addressed display device that is provided on the first side and that includes a liquid crystal, organic EL or inorganic EL material, and wherein the second functional portion is provided for the cartridge body
10 and includes a control section for driving the matrix-addressed display device, a memory for storing image data to be presented on the matrix-addressed display device, and a power supply for supplying power to the matrix-addressed display device.

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18. The disc cartridge of claim 17, wherein the second functional portion further includes a loudspeaker provided for the cartridge body.

20 19. The disc cartridge of claim 17, wherein the first

functional portion further includes a transparent tablet on the surface of the matrix-addressed display device such that information fed into the tablet is displayed on the matrix-addressed display device.

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20. The disc cartridge of claim 3, wherein the first functional portion is a planar loudspeaker that is provided on the first side, and wherein the second functional portion includes a memory for storing audio information to be reproduced through the planar loudspeaker, a control section for converting the audio information and transmitting a signal to the planar loudspeaker, and a power supply for supplying power to the control section.

15 21. The disc cartridge of claim 18, wherein the second functional portion further includes a microphone that is provided for the cartridge body, and wherein the control section converts sound, recorded with the microphone, into the audio information and then stores the information in the
20 memory.

22. The disc cartridge of one of claims 17 to 21,
wherein the disc includes a disc-side terminal, which is
connected to the first functional portion and which is
provided on the outer periphery of the disc, and wherein the
5 cartridge body includes a body-side terminal which is
connected to the second functional portion.

23. The disc cartridge of claim 22, wherein the disc
cartridge further includes a disc holding portion for holding
10 the disc thereon while the shutter is closed, and wherein the
disc-side and body-side terminals are contactable with each
other while the disc is being held by the disc holding
portion.

15 24. The disc cartridge of claim 23, wherein the disc-
side terminal is a plurality of concentric ringlike
conductive regions provided along the outer periphery of the
disc.

20 25. The disc cartridge of claim 23, wherein the disc has

a disc-side mark and the cartridge body has a body-side mark,
and wherein when the disc is rotated within the disc storage
portion of the cartridge body such that the disc-side and
body-side marks are aligned with each other, the disc-side
5 and body-side terminals contact with each other.

26. The disc cartridge of one of claims 17 to 21,
wherein the disc includes a disc-side terminal, which is
connected to the first functional portion, provided on the
10 first side and has a conductive surface, while the cartridge
body includes a body-side terminal, which is connected to the
second functional portion, provided on the upper surface of
the cartridge body and has a conductive surface, and wherein
when the disc-side and body-side terminals are touched with
15 fingers at the same time, the first and second functional
portions are electrically connected together.

27. A disc drive comprising:

a supporting portion into which the disc cartridge of one
20 of claims 1 to 16 is loadable, a disc having a first side with

a first functional portion and a second side being stored in the disc cartridge;

a spindle motor for mounting and rotating the disc thereon;

5 a head, which is able to read and/or write data from/on the second side of the disc;

a sensor for detecting a rotational angular position of the spindle motor when the disc is mounted on the spindle motor; and

10 a control section for controlling the spindle motor in accordance with a command to eject the disc cartridge such that the spindle motor stops at the rotational angular position when the disc is mounted thereon.

15 28. A disc drive comprising:

a supporting portion into which the disc cartridge of one of claims 1 to 16 is loadable, a disc having a first side with a first functional portion and a second side being stored in the disc cartridge;

20 a spindle motor for mounting and rotating the disc

thereon;

a head, which is able to read and/or write data from/on
the second side of the disc;

a sensor for detecting a mark on the second side of the
5 disc; and

a control section for controlling the spindle motor such
that the spindle motor stops at a position where the mark of
the disc is detected.